

SHOMA HOMES DEVELOPMENT, INC. – PARK SQUARE AT DORAL DEVELOPMENT

Client Name: *Shoma Homes Development, Inc.*

Type of Service: *Civil Engineering, Design, and Permitting Services*

Milian, Swain and Associates, Inc. (MSA) provided design and permitting civil engineering services for the development of the Park Square At Doral project (Ryder Site Development) located in the City of Doral on NW 82 Avenue between NW 36 Street and NW 33 Street in Miami-Dade County, Florida. MSA scope of services included:

Onsite Paving, Grading and Drainage

- Prepared onsite paving, grading and drainage plans (PG&D) in accordance with the Miami-Dade County Department of Environmental Resources Management (DERM) and the Miami-Dade County Public Works Department (MDCPWD) permitting criteria.
- Prepared water management calculations to determine the minimum finished floor elevations and the minimum road crown elevations.
- Developed preliminary typical roadway sections and routed the 10year-24hour and the 100year-72hour design storm events.
- Developed the high and low point grading pattern for the project; coordinated with the geotechnical engineer for the required testing and developed exfiltration trench calculations to determine the linear feet of exfiltration trench required to service the 5year-24hour drainage event.
- The PG&D plans contained final typical roadway sections specifying the asphaltic concrete, the limerock base and the base structural layer as well as the sidewalk edge of pavement treatment.
- Provided site perimeter typical sections and onsite pavement marking and signage plans in accordance with the MDCPWD's permitting criteria. Plans included a handicap parking detail as well as typical pavement marking details. Drainage details were provided such as exfiltration trenches, pollution retardant baffles, roadway pavers and sidewalks.



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Onsite Water Distribution System

- Prepared onsite water distribution system plans in accordance with the MDCPWD, MDWSD, Miami-Dade County Fire Department (MDCFD), DERM and the Miami-Dade County Health Department (HRS) permitting criteria.
- Coordinated with the MDWASD and requested a points of connection letter for water and sewer.
- Prepared a preliminary layout of the water distribution system and prepared a Hardy Cross analysis of the system to determine if the system will have sufficient capacity to service the fire flows identified by the mechanical engineer.
- Prepared onsite water distribution system plans depicting 8” and 12” minimum diameter water mains and associated valving as required by the MDWASD.
- The water distribution plans identified the location of all water service lines and meters as well as the location of fire hydrants, fire lines and associated double detector back flow preventors and fire department connections for proposed buildings.



Onsite Sanitary Sewer Collection and Transmission System

- Prepared onsite sanitary sewer collection and transmission system plans in accordance with the MDCPWD, MDWASD, DERM.
- Located the sanitary pumping station site and prepared a preliminary layout of the proposed sanitary sewer and transmission system based on the MDWASD’s points of connection letter.
- Prepared sanitary sewer pumping station hydraulic calculations and a preliminary sanitary sewer pumping site plan.
- The design of the onsite sanitary sewer collection system consisted of preparing a one-quarter square mile master plan report for submittal to the MDWASD. The master plan report depicted the service collection area of the proposed donation sanitary pumping station. The master plan required hydraulic calculations of the proposed pumping station and associated force main reflecting the final site plan proposed improvements.
- Prepared plans for an on-site wet-well sanitary sewer pumping station.

NW 36 Street Improvements - As part of the initial efforts associated with this task, MSA met extensively with Shoma Development Corp. and the attorneys to develop preliminary plans depicting the proposed west bound left turn lane into the project. MSA coordinated meetings to identify the engineers intentions regarding the existing curb openings and median modifications. Based on these meetings MSA’s preliminary plans were used to discuss with the Miami-Dade County Public Works Department the possibility of obtaining a signalized intersection at the main project entrance on NW 36th Street. MSA also met with various representatives of the

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Miami-Dade County Public Works Department to identify the requirements of the east bound right turn lane into the project on NW 36th Street.



Aerial view of the complete project

MSA prepared final plans depicting the median improvements to NW 36th Street along the north property line of the project. The median improvements included creating an opening for a west bound left turn lane into the project. MSA's plans included the associated grading and pavement marking and

signage associated with this median improvement. MSA also prepared final plans depicting a proposed east bound right turn lane into the main entrance of the project on NW 36th Street. In addition, MSA prepared drainage calculations for the exfiltration trench required to service the proposed right turn lane.

NW 33rd Street Improvements - As part of the initial efforts associated with this task, MSA met extensively with Shoma Development Corporation and the project architect to coordinate the west bound left turn into the main entrance of the project along NW 33 Street. MSA prepared preliminary plans of this west bound turn lane as well as the median improvements associated with an east bound left turn lane into the main entrance of the project. In addition, MSA prepared final plans depicting the median improvements to NW 33 Street along the south property line of the project. MSA's plans included the associated grading and pavement marking and signage associated with this median improvement. MSA also prepared plans depicting a proposed west bound right turn lane into the main entrance of the project on NW 33 Street. The plans included the associated grading and pavement marking and signage associated with this improvement.

Permitting Services - MSA assisted in the preparation and processing of permit applications through agencies having regulatory jurisdiction over this project.

- Miami-Dade Water & Sewer Department
- Miami-Dade County DERM Water Supply Section
- Miami-Dade County Health Department
- Miami-Dade County Fire Department
- Miami-Dade County Public Works Department
- Miami-Dade County DERM Wastewater Section
- Miami-Dade County DERM Water Control Section

Utility Negotiations and Meetings - MSA negotiated with MDWASD and DERM regarding the Developer Connection Agreement. MSA attended coordination meetings with Shoma Development Corporation and other design professionals as well as meetings required with regulatory agencies having jurisdiction over this project. MSA was responsible for coordinating utility relocations as required by the proposed project improvements.